

FIG. - 1A

# Light diffraction on grating

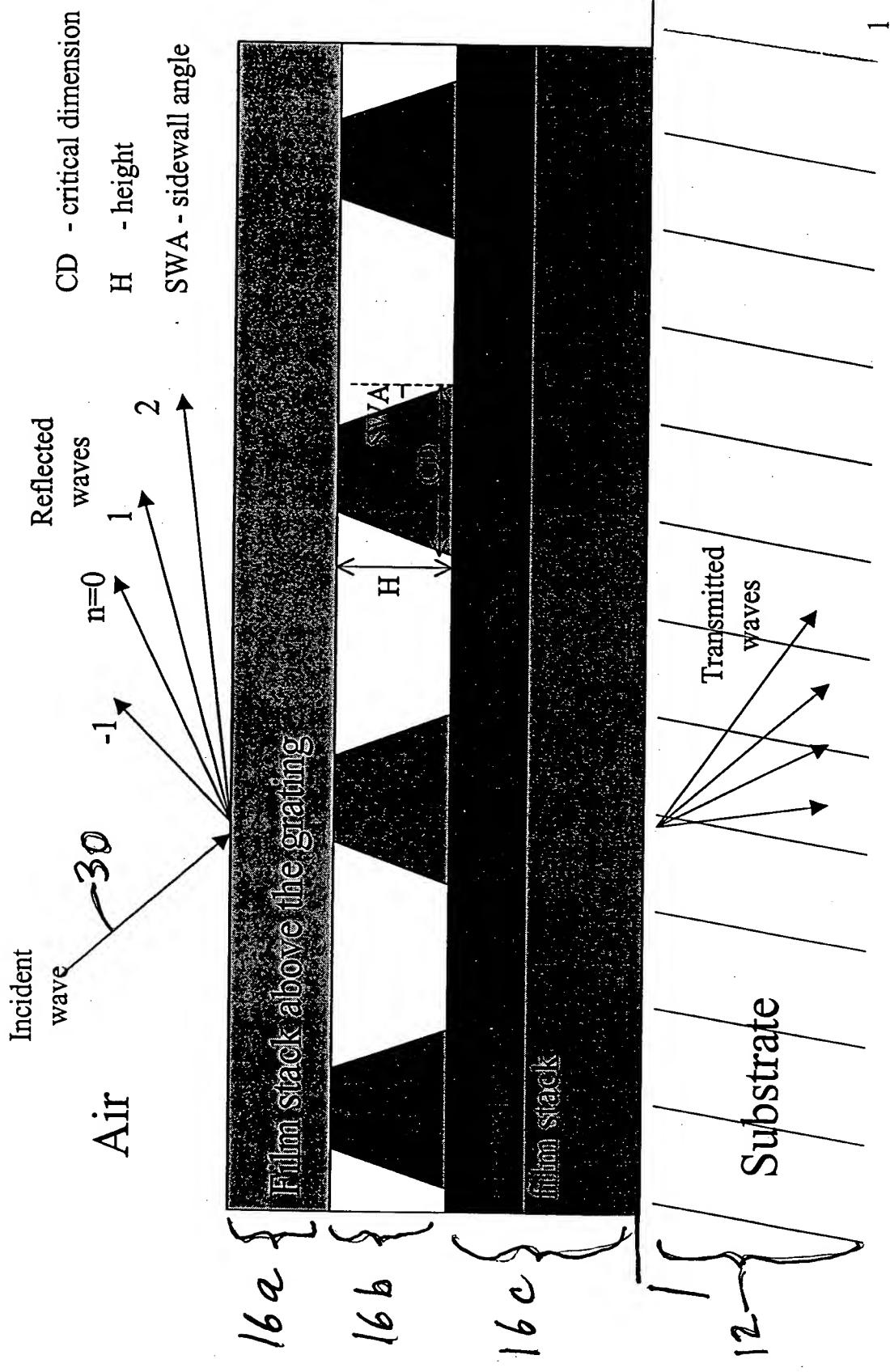
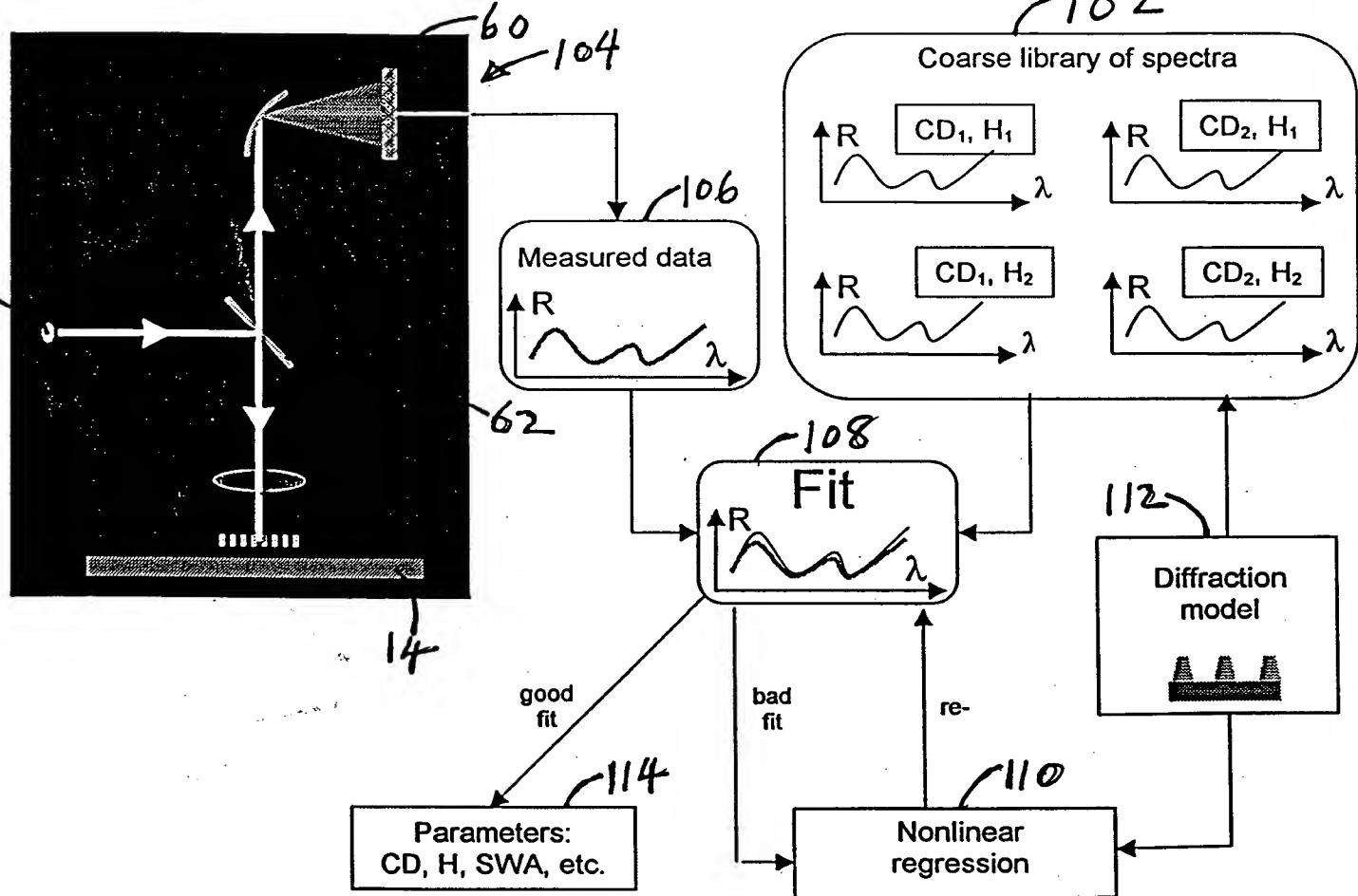


Fig. 1B

26 24 22 20 18 16 14 12 10 8 6 4 2



F16.2

## Adaptive library generation: Minimize unused library grids for maximum efficiency

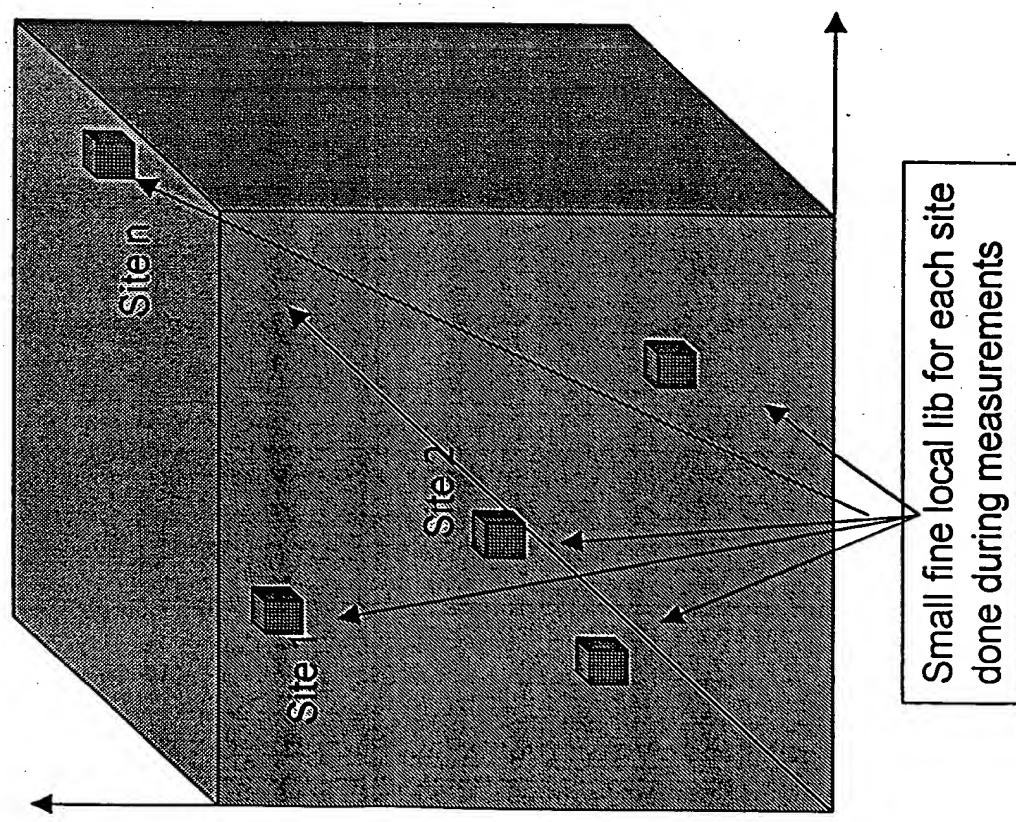


Fig. 3

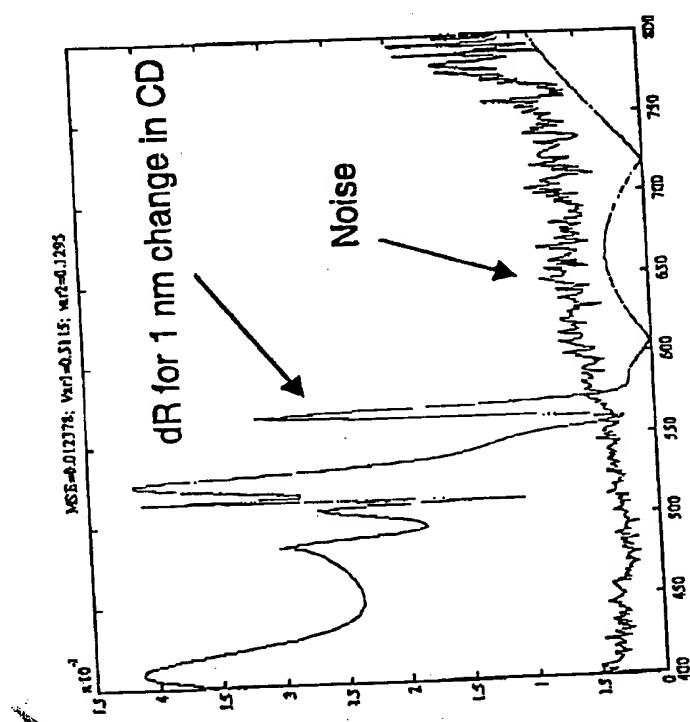


Fig. 4

154

Calculation of S-matrix for the top film stack

152

Calculation of the grating S-matrix

- Find solution in each slab
- S-matrix propagation within the grating

150

S-matrix propagation in the bottom film stack

FIG. 5

302 320 330 340 350 360

## 2. Re-use of grating internal S-matrices

S-matrix is saved after processing most of the slabs

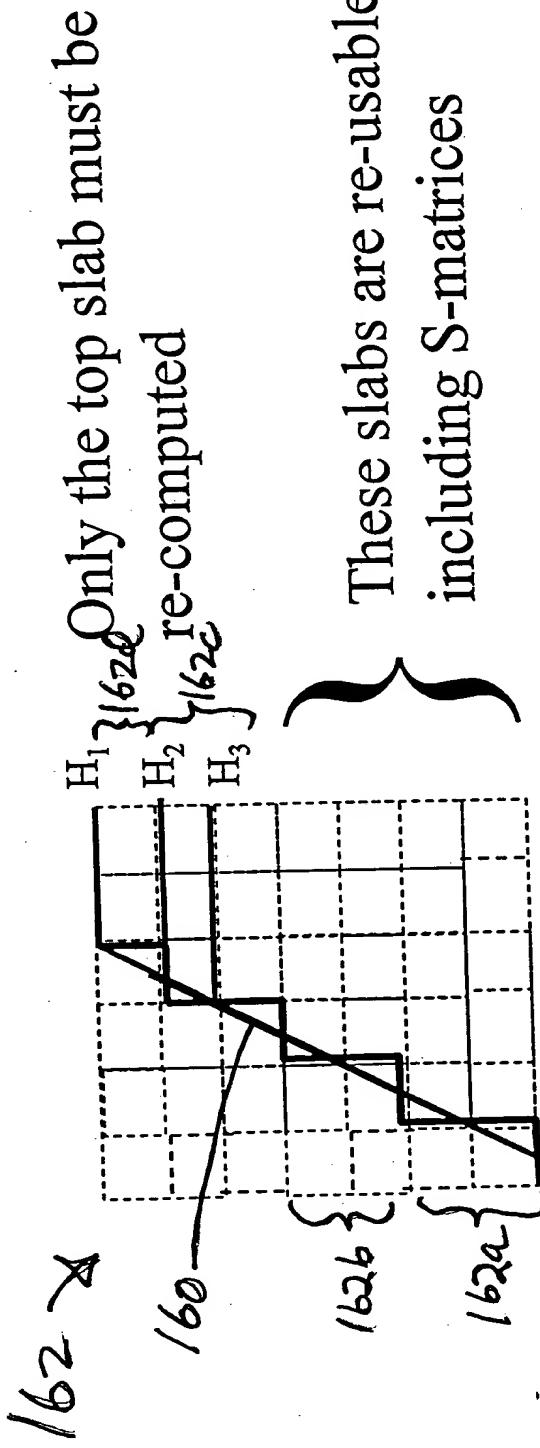


Fig. 6

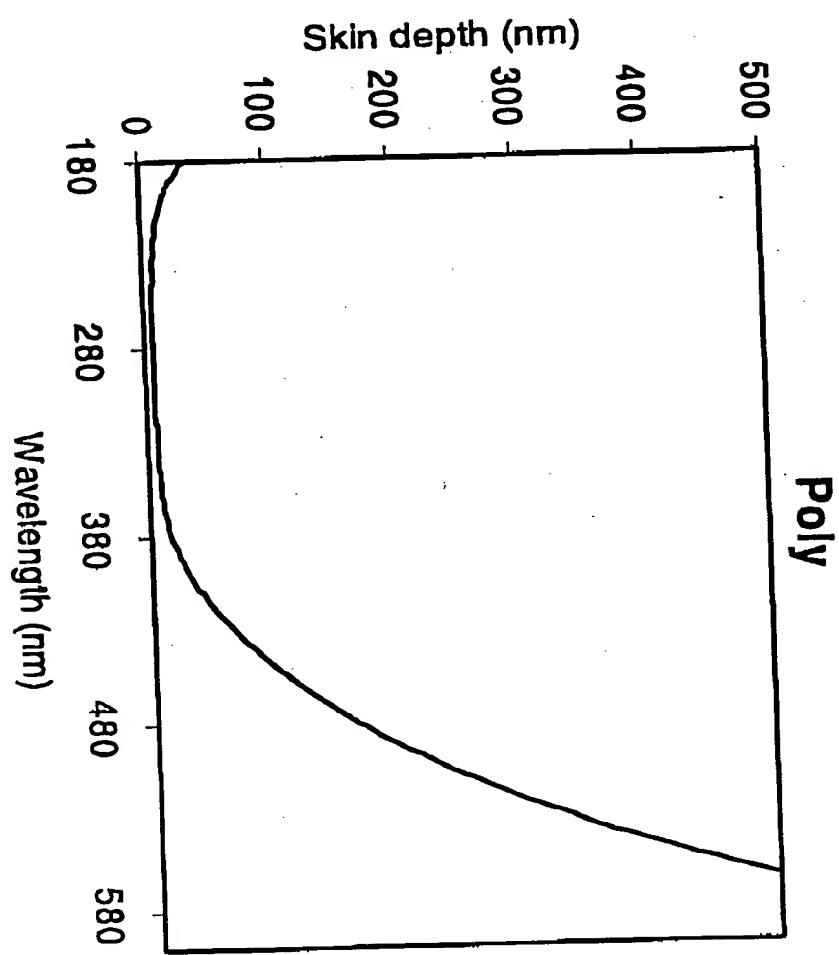
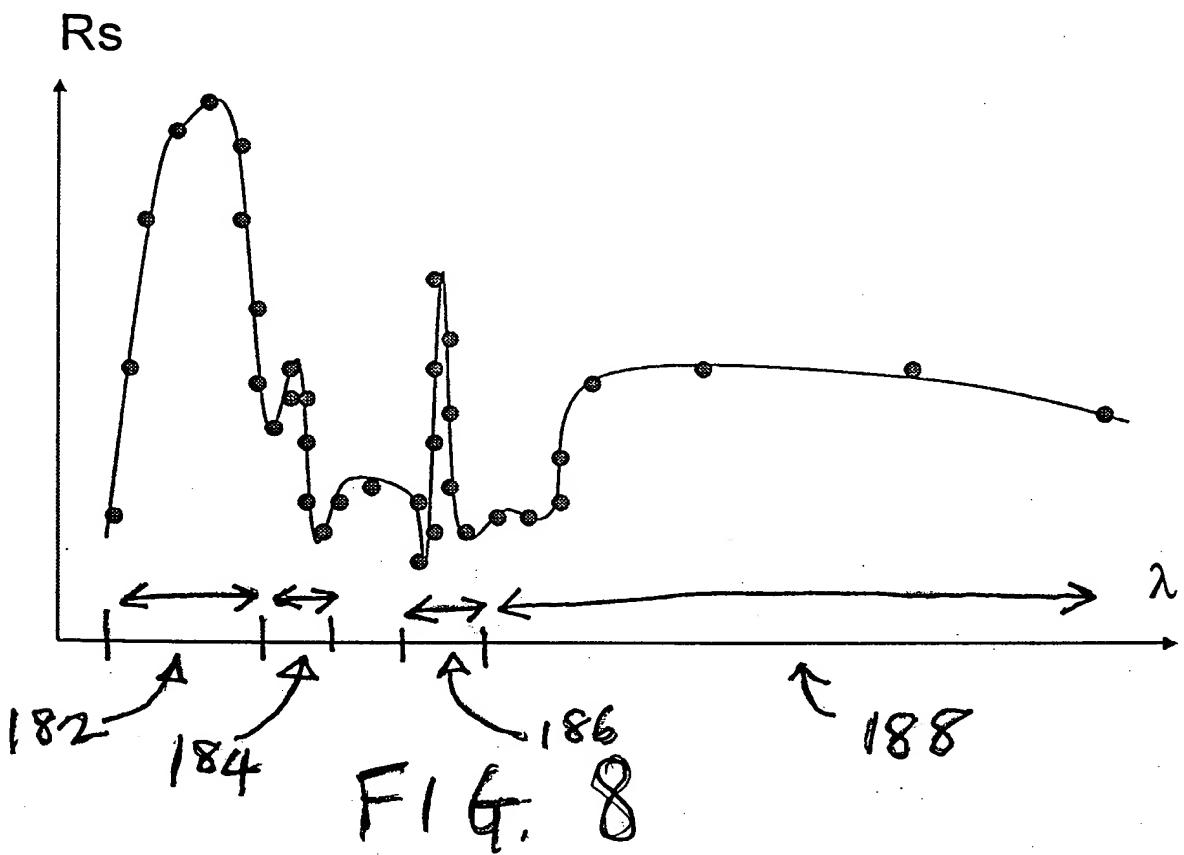


Fig. 7



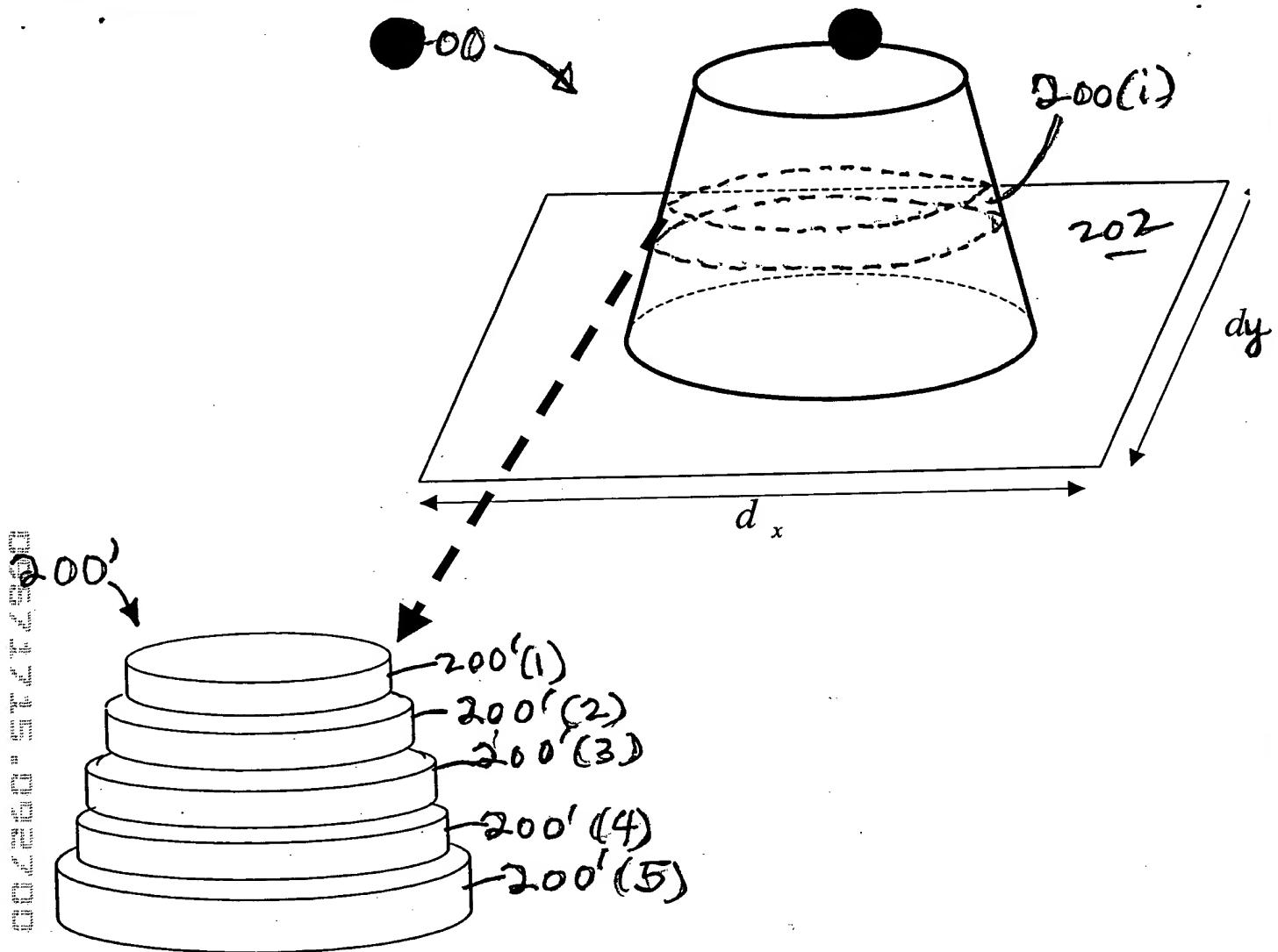
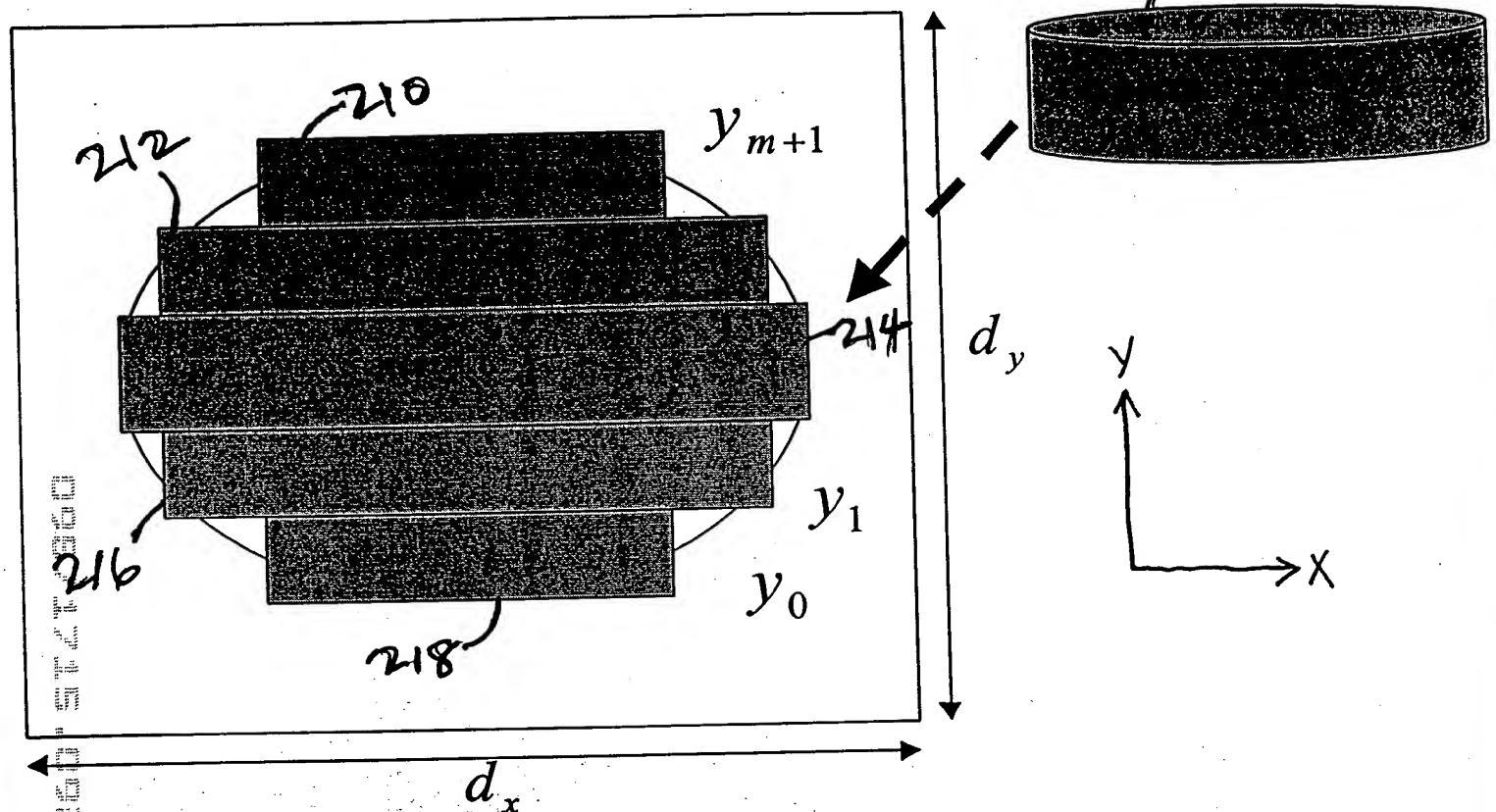


FIG. 9

Fig. 2.



Pseudo-periodic boundary conditions in y-direction:

$$E(x, y_{m+1}) = E(x, y_0) e^{i k_{0,y} d_y}$$

FIG. 10

Conical mounting

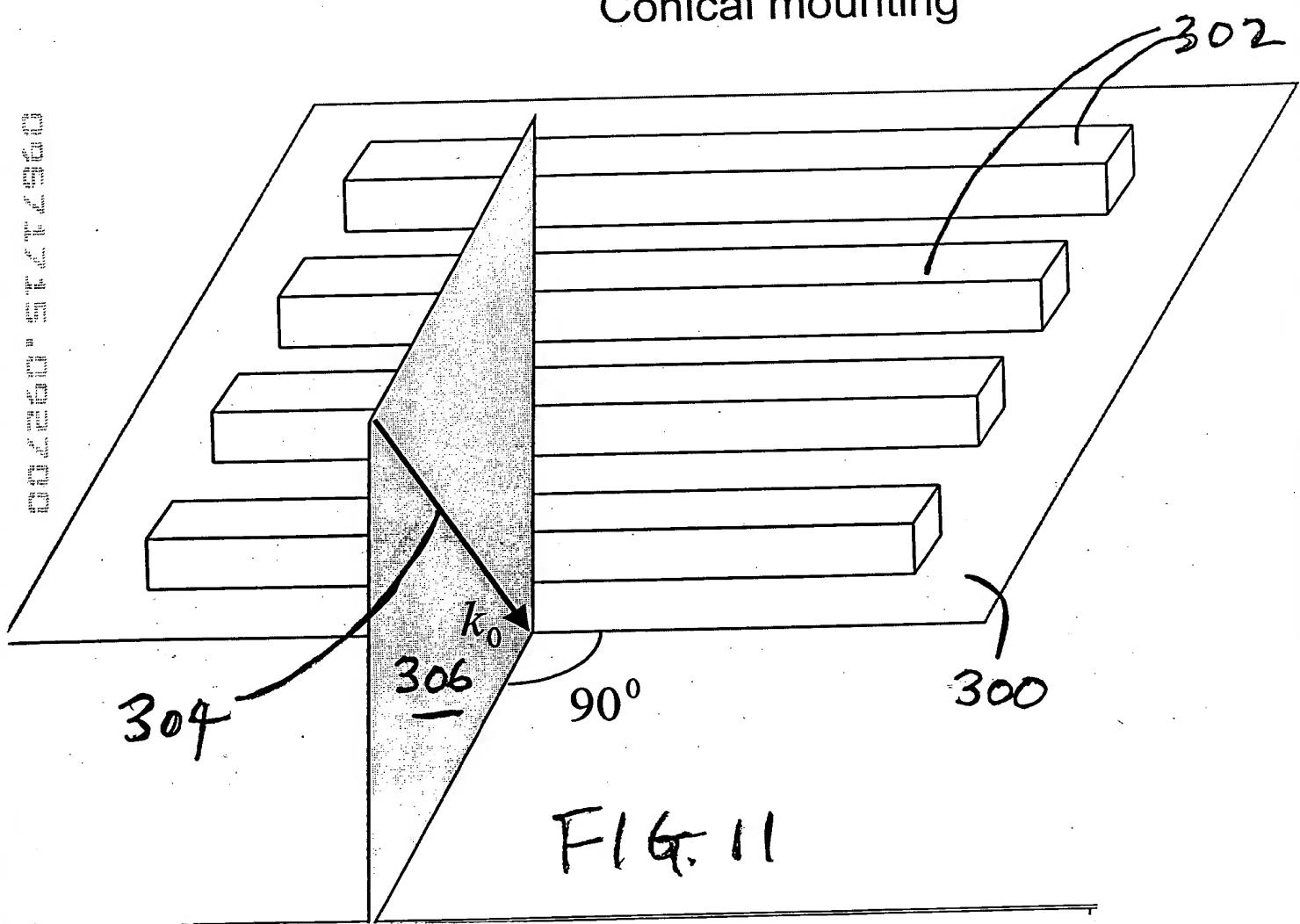


FIG. 11

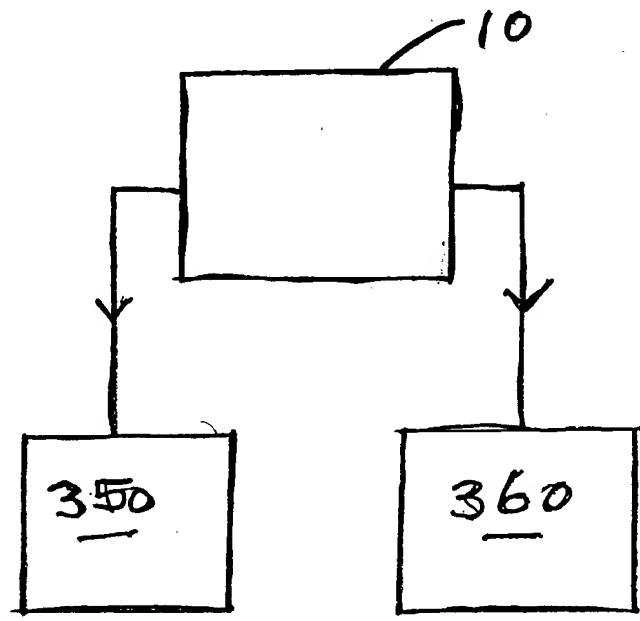


FIG. 12

